



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,767	04/05/2000	Yasuhiro Sato	00FN006US	6702
7590 10/06/2003				
MCGINN & GIBB 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			EXAMINER CHOWDHURY, TARIFUR RASHID	
			ART UNIT 2871	PAPER NUMBER

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/543,767

Applicant(s)

SATO, YASUHIRO

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 5-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/29/03 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 7-9 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuga et al., (Sasuga), USPAT 5,680,183 in view of Hashimoto, USPAT 5,442,470.**

1. Sasuga discloses (col. 16, line 22 - col. 17, line 15) and shows in Figs. 23-25, 29 and 34, a liquid crystal display including:

- a liquid crystal display panel (PNL) held between an upper frame (SHD) and a lower frame (LCA), the upper frame including a display window (LCW), wherein the upper frame (SHD) includes a second stepped protrusion (FK)

(Fig.25) formed in the vicinity of its end, and the other frame (LCA) has a first stepped protrusion (FKP) (Fig. 34) formed in the vicinity of its end, wherein the second stepped protrusion is fitted inside the first stepped protrusion, and

wherein the first stepped protrusion and the second stepped protrusion are formed to differ from each other in a protruding direction has protrusion (CL) formed.

Sasuga does not explicitly disclose that the upper frame and the lower frame are coupled to each other via foldable U-shaped portion.

Hashimoto discloses a liquid crystal display device wherein the display panel wherein the display panel and the circuit boards are attached via a foldable U-shaped portion (Fig. 2). Hashimoto also discloses that by attaching two frames by a foldable U-shaped portion it is possible to uniformly distribute stresses and thus obtain a display device greatly improved both in resistance to vibration and to impact. Hashimoto also discloses that such a configuration reduce the overall weight of the apparatus (col. 2, lines 65-68, col. 3, lines 1-4 and 17-26).

Hasimoto is evidence that ordinary workers in the art of liquid crystal would find a reason, suggestion or motivation to use a foldable U-shaped portion.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display of Sasuga such that attaching the upper frame and the lower frame with a foldable U-shaped portion so that a display device greatly improved both in resistance to vibration and to impact is obtained as well as the overall weight is reduced, as per the teachings of Hashimoto.

Accordingly, claims 1, 7-9 and 11-18 would have been obvious.

1. **Claims 5, 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuga in view of Hasimoto as applied to claims 1, 7-9 and 11-18 above and in view of Toshiya et al., (Toshiya), JP 06-051308 A.**

2. Sasuga does not explicitly disclose that the frames are vacuum formed of resin material.

Toshiya discloses a liquid crystal display device wherein the frame is vacuum formed of resin material. Toshiya also discloses that when the frames are vacuum formed of resin material, it is possible to obtain a small-sized, thin and durable liquid crystal display device (abstract).

Toshiya is evidence that ordinary workers in the art of liquid crystal would find a reason, suggestion or motivation to use frames that are vacuum formed of resin material.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Sasuga such that forming the frames of resin material obtained by vacuum molding so that a display device of small-sized, thin and durable is obtained, as per the teachings of Toshiya.

As to claim 6, the use of screen-printing as an electro-conductive pattern forming method is common and known in the art and thus would have been obvious to avail a proven technology.

### ***Response to Arguments***

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

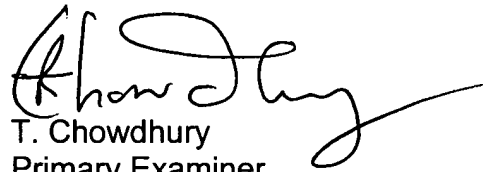
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

TRC  
September 17, 2003

  
T. Chowdhury  
Primary Examiner  
Technology Center 2800